

Competition:

**UQUAPS 2016 "Pitching Research" Competition**

Submission id:

**UQUAPS-2016-050**

Date submitted:

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Faculty or Institute:

**UQ Medicine and Biomedical Sciences**

School:

**Medicine**

Programme:

**PhD**

Load:

**Full-time**

Level:

**10-12 months**

Name:

**Kathy Dallest**

(A) Working Title:

**Improving Telehealth value propositions for sustainability: development of a decision tool to aid health services and consumers.**

Word count: **946 words**

<b>(A) Working Title</b>	Improving Telehealth value propositions for sustainability: development of a decision tool to aid health services and consumers.
<b>(B) Basic Research Question</b>	How is telehealth value co-created by consumers, clinicians, health service managers and other stakeholders? How can value co-creation accelerate telehealth innovation?
<b>(C) Key paper(s)</b>	<p>McLean, S., Sheikh, A., Cresswell, K., Nurmatov, U., Mukherjee, M., Hemmi, A., &amp; Pagliari, C. (2013). <b>The Impact of Telehealthcare on the Quality and Safety of Care: A Systematic Overview</b>. PLoS ONE, 8(8), e71238.</p> <p>Kyratsis, Y., Ahmad, R., Hatzaras, K., Iwami, M., &amp; Holmes, A. (2014). <b>Health Services and Delivery Research Making sense of evidence in management decisions: the role of research-based knowledge on innovation adoption and implementation in health care</b>.</p> <p>McColl-Kennedy et al (2017) <b>Cocreative customer practices: Effects of health care customer value cocreation practices on well-being</b>. Journal of Business Research</p> <p>Ranjan, K., &amp; Read, S. (2016). <b>Value co-creation: concept and measurement</b>. Official Publication of the Academy of Marketing Science</p>
<b>(D) Motivation / Puzzle</b>	Telehealth, the use of information and communications technology to deliver health care at a distance, is identified as a key enabler of improved health outcomes through timely access to appropriate services. Innovative telehealth in Australia occurs in isolation and mainstream uptake is slow. Health services literature identify barriers to uptake and sustainability are linked to uncertainty about the risks and benefits in complex highly diverse socio-technical environments with multiple stakeholders. There is a gap however in the literature about how various views on value are reconciled into an acceptable value proposition that supports a decision for a new telehealth service. This project aims to generate new knowledge to address this gap.
<b>THREE</b>	<b>Three core aspects of any empirical research project i.e. the "IDioTs" guide</b>
<b>(E) Idea</b>	<p>The aim of this research study is to develop a decision tool to help health professionals, consumers and health service managers co-create telehealth value propositions. Sustainable telehealth implies that the service is of value to all stakeholders. A better understanding of how that value is realised and the factors that have an impact on uptake will enable the right factors to be included in the decision tool to support improvement. The context for this project will be teledermatology with applicability to other health care settings. This study builds on theories and empirical evidence from service science, diffusion of innovation in healthcare and value co-creation in the context of telehealth innovation and implementation. Evidence from teledermatology will feature in the application of the study's concepts and outcomes.</p> <p>Central hypothesis: Health services that use consistent methods and tools to co-create value propositions are more successful at implementing innovative telehealth solutions.</p>
	<p>Both qualitative and quantitative data will be generated in Australian health services. The Princess Alexandra Hospital (PAH, Brisbane) Dermatology department has incorporated teledermatology into standard clinical practice with referrals from across the state enabling people in rural areas to access expert dermatology specialists.</p> <p>Phase 1. Study participants will be sourced from this service to include, clinicians, consumers and health service managers from the PAH and remote sites site subject to ethics approval from UQ and Queensland Health Research Ethics Committee (HREC). The sample period will be 2016-2017.</p>

<b>(F) Data</b>	<p>Informants will be asked about their perceptions of value, risk and benefit, about telehealth service decision making practices they have been involved in and what types of information and evidence have been used. Data will be generated from transcribed semi-structured informant interviews and thematic analysis conducted.</p> <p>Phase 2. Analyses from phase 1 will be triangulated with findings from a literature review and synthesis and a policy discourse analysis to identify factors and constructs to be incorporated into the candidate decision tool.</p> <p>Phase 3. The candidate decision tool will be pilot tested with participants recruited from the PAH Telehealth Centre and remote clinical services subject to ethics approval. Partial Least Squares analysis will be conducted to test the index and validated with a second sample. External content validity of the tool will be tested with a Delphi panel.</p> <p>Data: a) constructs and unit level concepts extracted from literature synthesis; b) content data extracted from literature synthesis, telehealth policy and guidelines; c) qualitative data from semi-structured interviews, document analysis, observation of meetings; d) index data collected via electronic survey</p>
<b>(G) Tools</b>	<p>A pragmatic convergent multi-phase mixed methods approach will be used. To identify the most relevant characteristics to examine and include in the tool a number of research methods will be used: a) content analysis, b) discourse analysis, c) descriptive and inferential analyses, d) content, construct and face validity d) PLS-SEM. Further statistical expertise input will be sought.</p> <p>Software applications: NVivo, Excel, SPSS, R, SMARTPLS, REDCap</p>
<b>TWO</b>	<b>Two key questions</b>
<b>(H) What's New?</b>	<p>The novelty of this project is the development of a decision tool to help improve the value propositions of telehealth services and contribute to sustainable service change. Its development is informed by knowledge from service sciences, diffusion of innovation in healthcare, value co-creation, to be applied in telehealth and is designed to be of practical use in real world healthcare settings.</p>
<b>(I) So What?</b>	<p>An understanding of the processes, structures and relationships that surround the creation of telehealth value propositions by multiple stakeholders will lead to a better understanding of decision making challenges in telehealth innovation. This can identify ways to overcome difficulties to improve jointly created value propositions leading to more sustainable telehealth services and potential reduction of the negative effects of unsustainable trials, projects and pilots.</p>
<b>ONE</b>	<b>One bottom line</b>
<b>(J) Contribution?</b>	<p>To date, barriers to uptake of innovative telehealth have been investigated in the telehealth and health service literature. Validated measures of value co-creation have been developed and reported in the marketing literature. This study combines these two bodies of knowledge building upon both to create new knowledge and a tool to accelerate translation of research outcomes into practice.</p>
<b>(K) Other Considerations</b>	<p>Target journals: Journal of Medical Internet Research, Implementation science, Journal of Telehealth and Telecare, BMC Health Services Research, Journal of Service Research</p> <p>Collaboration: UQ Business School, senior clinicians and service managers in public and private sector, telehealth service managers, clinicians, consumer groups</p> <p>Risk: low, no competing protocols registered and gaps exist in the literature</p> <p>Ethics: low or negligible risk HREC.</p>